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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,472	09/25/2003	Myung Dae Oh	DPO-0007	4853
34610 7590 08/29/2008 KED & ASSOCIATES, LLP P.O. Box 221200 Chantilly, VA 20153-1200				
EXAMINER				
SHAN, APRIL YING				
ART UNIT		PAPER NUMBER		
2135				
MAIL DATE		DELIVERY MODE		
08/20/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/669,472

**Applicant(s)**

OH, MYUNG DAE

**Examiner**

APRIL Y. SHAN

**Art Unit**

2135

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,5-8,11,12,53 and 54 is/are pending in the application.  
4a) Of the above claim(s) 7,8,11 and 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,6,53 and 54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

#### **DETAILED ACTION**

1. A Request for Continued Examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11 June 2008 has been entered.
2. Claims 1, 6 and 54 have been amended. Claims 3-4, 9-10 and 13-52 have been canceled. Claims 8 and 11-12 are withdrawn from consideration due to restriction requirement. No new claims have been added. Claims 1-2, 5-6 and 53-54 are currently pending in the present application.
3. Applicant's amendments and argument have been fully considered, but are moot in view of new ground rejection as set forth below. It is noted that Applicant's arguments are directed towards limitations newly added via amendments.
4. Any claim objection/rejection not repeated below is withdrawn due to Applicant's amendment.

#### ***Admitted Prior Art***

5. The examiner acknowledges in the response dated 14 April 2008 from the Applicant, the figures 1-4 are Applicant's Admitted Prior Art. The examiner further points out par. [1] – par. [25] on pages 1-7 and par. [62] – par. [65] on pages 18-19 of

the Applicant's original disclosure are also deemed as Prior Art since they are the corresponding paragraphs of detail description of figures 1-4.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-2, 5-6 and 53-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per **claim 1**, "ciphering call information transmitted..." is being recited. However, it is not clear whether this call information is same as or different from "transferring call information...the call information" recited in the same claim.

As per **claim 2**, "...wherein the key value..." is being recited. However, "the key value" lacks of antecedent basis.

Any claim not specifically addressed, above, is being rejected as incorporating the deficiencies of a claim upon which it depends.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the

subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 1, 5-6 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (hereinafter as Admitted Prior Art) in view of Arata et al. (European Patent publication number 0617528 A2, published on 28 September 1994 and hereinafter as Arata et al.).

As per **claim 1**, Admitted Prior Art discloses a method of ciphering call information transferred between a mobile communication terminal and a network, comprising:

connecting a call between the terminal and the network (e.g. figs. 1, 2 and 3 of Admitted Prior Art and "...when any user transmits or receives a call using terminals 110, 120, the terminal is connected to a respective one of the base stations 111, 121" - e.g. par. [10] on page 4 of Admitted Prior Art and "...When a

terminal 10 transmits a connection management...service request message 301 to the network 20 in order to transmit a voice call..." – e.g. par. Par. [16] on page 5 of Admitted Prior Art);

transferring call information between the terminal and network without ciphering the call information (step 402 in fig. 4 of Admitted Prior Art. *Please note step 403 "Perform the ciphering?" follows step 402 and therefore, it is clear the communication in step 402 is not ciphered*);

transmitting a ciphering authentication request message from the network to the terminal in response to the ciphering request (step 202 in fig. 2 of Admitted Prior Art and step 302 in fig. 3 of Admitted Prior Art);  
transmitting a ciphering authentication response message from the terminal to the network in response to the ciphering authentication request message (step 203 in fig. 2 of Admitted Prior Art and step 303 in fig. 3 of Admitted Prior Art);

transmitting a ciphering activation completion message from the network to the terminal in accordance with the ciphering authentication response message (step 204 in fig. 2 of Admitted Prior Art and step 304 in fig. 3 of Admitted Prior Art); and

ciphering call information transmitted between the terminal and network after the ciphering activation completion message is received from the network (step 413 in fig. 4 of Admitted Prior Art).

Admitted Prior Art disclose transmitting a ciphering request for call information from the network to the terminal after the call information has been transferred between the terminal and network without ciphering (e.g. step 407 in fig. 4 of Admitted Prior Art)

Admitted Prior Art does not disclose transmitting a ciphering request for call information from the terminal to the network and wherein the ciphering request is transmitted during transfer of data from the terminal to the network during the call.

Arata et al. discloses transmitting a ciphering request for call information from the terminal to the network and wherein the ciphering request is transmitted during transfer of data from the terminal to the network during the call ("When the user of a radio telecommunication apparatus requests a privacy mode and a call origination...sends a call signal including the requested privacy mode to a base station" – e.g. abstract)

Admitted Prior Art and Arata et al. are analogous art of the same field of mobile communication.

It would have been obvious for a person with ordinary skill in the art at the time of the invention to incorporate Arata et al.'s transmitting a ciphering request for call information from the terminal to the network and wherein the ciphering request is transmitted during transfer of data from

the terminal to the network during the call into Admitted Prior Art's method or replace Admitted Prior Art's transmitting a registration request from the terminal to the network with Arata et al.'s transmitting a ciphering request for call information from the terminal to the network.

The motivation of doing so would have been to enable a caller/user to "sends a call signal including the requested privacy mode to a base station" to enable the terminal to transmit the request if the ciphering request has not been raised by the network and "use a privacy mode having a voice privacy feature which protects the user's communicated voice signal against eavesdropping", as taught by Arata et al. (abstract and col. 2, lines 40- 43).

As per **claim 5**, Admitted Prior Art - Arata et al. discloses a method as applied above in claim 1. Admitted Prior Art – Arata et al. further discloses wherein the call information includes a voice information (e.g. figs. 1-4 of Admitted Prior Art and abstract of Arata et al. ).

As per **claim 6**, Admitted Prior Art – Arata et al. discloses a method as applied above in claim 1. Admitted Prior Art - Arata et al. further discloses wherein the call information includes data and wherein the ciphering request is transmitted during transfer of data from the terminal to the network during the call (e.g. figs 1-4 of Admitted Prior Art and abstract of Arata et al.).



As per **claim 53**, Admitted Prior Art - Arata et al. discloses a method as applied above in claim 1. Arata et al. further discloses wherein the ciphering request is generated and transmitted without including a RAND value for ciphering activation (e.g. abstract of Arata et al.).

11. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (hereinafter as Admitted Prior Art) in view of Arata et al. (European Patent publication number 0617528 A2, published on 28 September 1994 and hereinafter as Arata et al.) as applied to claims 1, 5-6 and 53 above, and further in view of Al-Tawil et al. (IEEE publication "A new authentication protocol for GSM network", published in 1998 (herein after as AL-Tawil et al.)

As per **claim 2**, Admitted Prior Art - Arata et al. discloses a method as applied above in claim 1. Admitted Prior Art – Arata et al. does not expressly disclose wherein the ciphering authentication request message includes a RAND value and wherein the key value is generated by the terminal based on the RAND value.

However, this well known feature of wherein the ciphering authentication request message includes a RAND value and wherein the key value is generated by the terminal based on the RAND value is disclosed in the AL- Tawil et al. ("a random number RAND is sent" – e.g. page 22, left column, lines 35-36) and wherein the key value is generated by the terminal based on the RAND value (page 22, right column).

Admitted Prior Art - Arata et al. - AL- Tawil et al. are analogous art of the same field of mobile communication.

It would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate AL- Tawil et al.'s wherein the ciphering authentication request message includes a RAND value and wherein the key value is generated by the terminal based on the RAND value into Admitted Prior Art - Arata et al. motivated by to provide "less signaling traffic and better call set up time that can be used in GSM networks", as disclosed in the abstract of AL- Tawil et al.

12. Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (hereinafter as Admitted Prior Art) in view of Arata et al. (European Patent publication number 0617528 A2, published on 28 September 1994 and hereinafter as Arata et al.) as applied to claims 1, 5-6 and 53 above, and further in view of Examiner's Official Notice.

As per **claim 54**, Admitted Prior Art - Arata et al. discloses a method as applied above in claim 1. Admitted Prior Art - Arata et al. does not disclose comprising: transmitting a ciphering deactivation request message from the terminal to the network during at a time when ciphered data is being transferred between the terminal and network; and deactivating ciphering in response to the ciphering deactivation request message, the ciphering being deactivated during the call.

Examiner takes Official Notice that it would have been obvious to a person with ordinary skill in the art at the time of the invention to incorporate transmitting a ciphering deactivation request message from the terminal to the network during at a time when ciphered data is being transferred between the terminal and network; and deactivating ciphering in response to the ciphering deactivation request message, the ciphering

being deactivated during the call into Admitted Prior Art - Arata et al., which is well known and common knowledge of the art at the time of the invention motivated by to save resource and improve speed in the mobile communication.

The examiner respectfully points out a person with ordinary skill in the art is someone having common sense and ordinary creativity (*KSR v. Teleflex 550 U.S., 127 S. Ct. 1727 (2007)*) will easily recognize that the steps claim 54 are merely "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *KSR* at 1739

#### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. (See PTO -892)

#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to APRIL Y. SHAN whose telephone number is (571)270-1014. The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y. Vu can be reached on (571) 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/April Y Shan/  
Examiner, Art Unit 2135

/KimYen Vu/

Supervisory Patent Examiner, Art Unit 2135